

1 What is claimed is:

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3 1. A washing machine comprising:
4 a housing;
5 a tub installed in the housing to store water;
6 a drum rotatably installed in the tub to hold a laundry; and
7 a water level sensing apparatus for sensing a water level to provide an appropriate
8 water level for each washing step, the water level sensing apparatus comprising:

9 an air chamber storing a predetermined amount of air to
10 communicate with the tub to have a pressure of the water work on the stored
11 air;
12 a sensor installed at the tube to sense the water level by sensing an
13 air pressure in the tube; and
14 a protecting member for preventing disassembly and breakage of the
15 air chamber and the tube.

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17 2. The washing machine as claimed in claim 1, wherein the air chamber is
18 connected to a drainpipe connected to the tub for discharging the water.

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20 3. The washing machine as claimed in claim 2, wherein the air chamber is
21 connected to an extension pipe diverging from the drainpipe.

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23 4. The washing machine as claimed in claim 1, wherein the tube is connected to
24 an extension pipe extending from the air chamber to be connected to the air chamber.

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26 5. The washing machine as claimed in claim 1, wherein the protecting member
27 encloses a connecting portion between the air chamber and the tube.

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29 6. The washing machine as claimed in claim 1, wherein the protecting member
30 is a rib extending from the air chamber to enclose a connecting portion between the air
31 chamber and the tube.

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33 7. The washing machine as claimed in claim 6, wherein the rib is cylindrical.

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35 8. The washing machine as claimed in claim 6, wherein the rib extends higher
36 than the connecting portion.

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38 9. The washing machine as claimed in claim 1, wherein the protecting member
39 securely fixes the air chamber to a peripheral part.

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41 10. The washing machine as claimed in claim 9, wherein the protecting member
42 comprises a boss formed at the tub and a flange formed at the air chamber to be coupled to the
43 boss.

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45 11. The washing machine as claimed in claim 1, further comprising a control
46 apparatus for controlling a supply and discharge of the water by being provided with the
47 sensed water level from the water level sensing apparatus.

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49 12. An apparatus for sensing a water level of a washing machine, the apparatus
50 sensing the water level to provide each washing step with an appropriate water level, the
51 apparatus comprising:

52 an air chamber storing a predetermined amount of air to communicate with the tub to
53 have a pressure of the water work on the stored air;

54 a sensor installed at the tube to sense the water level by sensing an air pressure in the
55 tube; and

56 a protecting member for preventing disassembly and breakage of the air chamber and
57 the tube.

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59 13. The apparatus as claimed in claim 12, wherein the air chamber is connected
60 to a drainpipe connected to the tub for discharging the water.

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62 14. The apparatus as claimed in claim 13, wherein the air chamber is connected
63 to an extension pipe diverging from the drainpipe.

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65 15. The apparatus as claimed in claim 12, wherein the tube is connected to an
66 extension pipe extending from the air chamber to be connected to the air chamber.

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68 16. The apparatus as claimed in claim 12, wherein the protecting member is a rib
69 extending from the air chamber to enclose a connecting portion between the air chamber and
70 the tube.

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72 17. The apparatus as claimed in claim 16, wherein the rib is cylindrical.

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74 18. The apparatus as claimed in claim 16, wherein the rib extends higher than the
75 connecting portion.

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77 19. The apparatus as claimed in claim 12, wherein the protecting member
78 securely fixes the air chamber to a peripheral part.

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80 20. The apparatus as claimed in claim 9, wherein the protecting member
81 comprises a boss formed at the tub and a flange formed at the air chamber to be coupled to the
82 boss.